Title: UNIVERSAL SELECTIVE GENOME AMPLIFICATION AND UNIVERSAL GENOTYPING SYSTEM Inventors(s): Callow et al. Docket No.: CAL-1 CIP 1/11

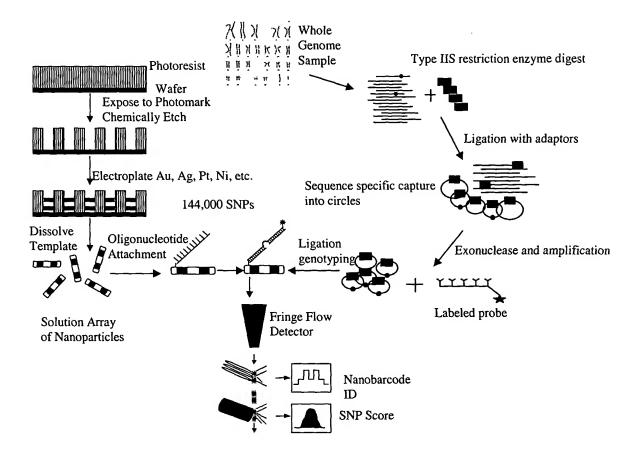


Figure 1

Title: UNIVERSAL SELECTIVE GENOME
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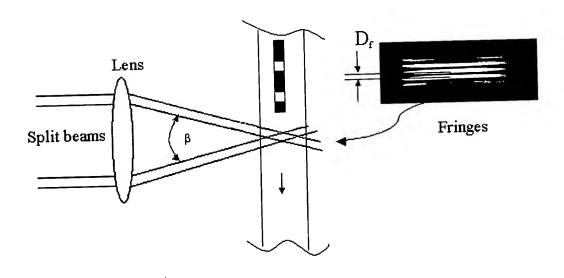


Figure 2

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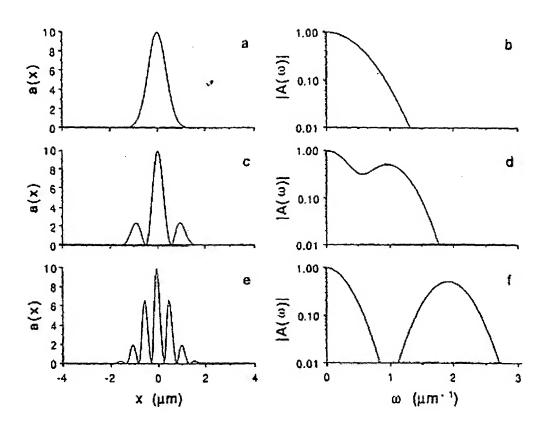


Figure 3

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Figure 4

Title: UNIVERSAL SELECTIVE GENOME
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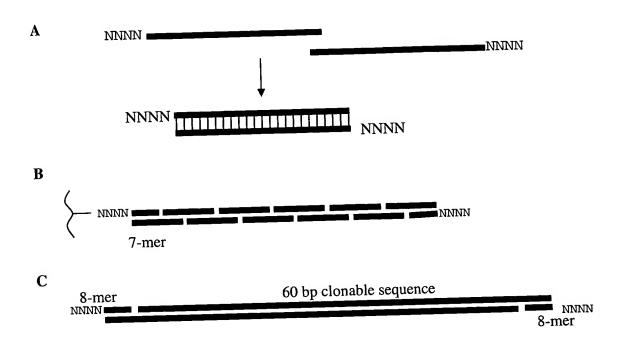


Figure 5

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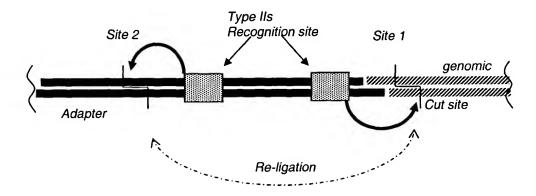


Figure 6

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A BB' C
Most frequent event: Adaptor binds one end, no circle formation
\overline{A} \overline{B} \overline{B} , \overline{A} ,
Desired result: Adaptor and fragment ends match, ligate and circularize
A B B' A' A B
Ends match, but different adapters bind both ends, no circle formation; less frequent
because intramolecular ligation after first adaptor attaches is very fast;
A B B' C C' A'
Two fragments ligate and circularize with an adaptor (chance to get one fragment with A
and one with B' overhang to ligate is 1 in 256, and most likely each will be blocked with
an adaptor; multiple ligation is also slower)
A B B' A'
Two fragments ligate and circularize: low frequency because out-competed by adapters.
No specific primer-binding site for amplification.

Figure 7

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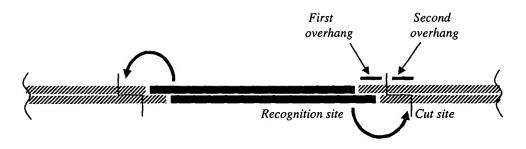


Figure 8

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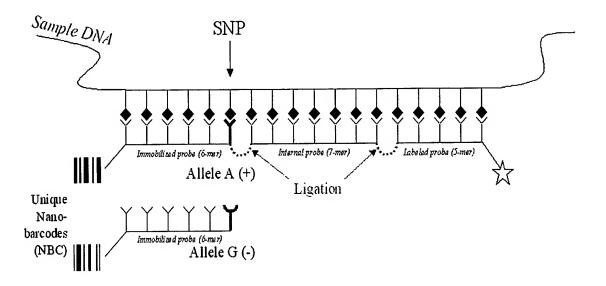


Figure 9

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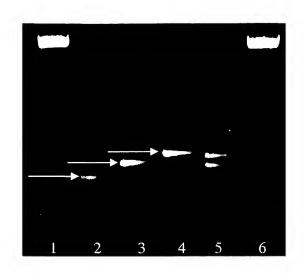


Figure 10A

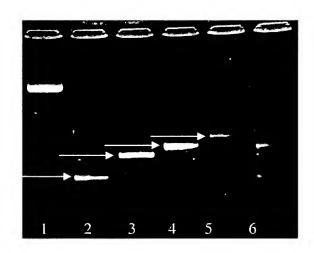
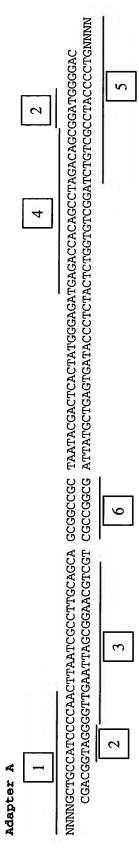


Figure 10B

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Left overhang oligonucleotide

Left Primer binding site

Right overhang oligonucleotide Right primer binding site 1. Left overhang oligonuclo 2. FokI recognition site 3. Left Primer binding site 4. Right primer binding site 5. Right overhang oligonuc 6. Not I site

Figure 11